

RECEIVED
NOV 13 2001

TECH CENTER 1600/2900

RAW SEQUENCE LISTING

DATE: 09/20/2001

PATENT APPLICATION: US/09/373,658C

TIME: 10:21:58

Input Set : A:\seqlist_1488 1070006.txt

Output Set: N:\CRF3\09202001\I373658C.raw

ENTERED

7 <110> APPLICANT: Iruela-Arispe, Luisa
8 Hastings, Gregg A.
9 Ruben, Steven M.
10 Jonak, Zdenka L.
11 Trulli, Stephen H.
12 Fronwald, James A.
13 Terrett, Jonathan A.
16 <120> TITLE OF INVENTION: Meth1 and Meth2 Polynucleotides and Polypeptides
19 <130> FILE REFERENCE: 1488.1070006
22 <140> CURRENT APPLICATION NUMBER: 09/373,658C
C--> 25 <141> CURRENT FILING DATE: 2001-09-10
28 <160> NUMBER OF SEQ ID NOS: 126
31 <170> SOFTWARE: PatentIn Ver. 2.0
35 <210> SEQ ID NO: 1
36 <211> LENGTH: 3261
37 <212> TYPE: DNA
38 <213> ORGANISM: Homo sapiens
40 <220> FEATURE:
41 <221> NAME/KEY: CDS
42 <222> LOCATION: (1)..(2853)
44 <220> FEATURE:
45 <221> NAME/KEY: misc_feature
46 <222> LOCATION: (3195)
47 <223> OTHER INFORMATION: n is any nucleic acid
49 <220> FEATURE:
50 <221> NAME/KEY: misc_feature
51 <222> LOCATION: (3248)
52 <223> OTHER INFORMATION: n is any nucleic acid
54 <220> FEATURE:
55 <221> NAME/KEY: misc_feature
56 <222> LOCATION: (3255)
57 <223> OTHER INFORMATION: n is any nucleic acid
59 <220> FEATURE:
60 <221> NAME/KEY: misc_feature
61 <222> LOCATION: (3261)
64 <223> OTHER INFORMATION: n is any nucleic acid
66 <400> SEQUENCE: 1
67 atg ggg aac gcg gag cgg gct ccg ggg tct cgg agc ttt ggg ccc gta 48
68 Met Gly Asn Ala Glu Arg Ala Pro Gly Ser Arg Ser Phe Gly Pro Val
69 1 5 10 15
71 ccc acg ctg ctg ctg ctc gcc gcg gcg cta ctg gcc gtg tcg gac gca 96
72 Pro Thr Leu Leu Leu Leu Ala Ala Ala Leu Leu Ala Val Ser Asp Ala
73 20 25 30
75 ctc ggg cgc ccc tcc gag gag gac gag gag cta gtg gtg ccg gag ctg 144
76 Leu Gly Arg Pro Ser Glu Glu Asp Glu Glu Leu Val Val Pro Glu Leu
77 35 40 45
79 gag cgc gcc ccg gga cac ggg acc acg cgc ctc cgc ctg cac gcc ttt 192

RAW SEQUENCE LISTING

DATE: 09/20/2001

PATENT APPLICATION: US/09/373,658C

TIME: 10:21:58

Input Set : A:\seqlist_1488 1070006.txt

Output Set: N:\CRF3\09202001\I373658C.raw

```

80 Glu Arg Ala Pro Gly His Gly Thr Thr Arg Leu Arg Leu His Ala Phe
81      50                      55                      60
83 gac cag cag ctg gat ctg gag ctg cgg ccc gac agc agc ttt ttg gcg      240
84 Asp Gln Gln Leu Asp Leu Glu Leu Arg Pro Asp Ser Ser Phe Leu Ala
85 65                      70                      75                      80
87 ccc ggc ttc acg ctc cag aac gtg ggg cgc aaa tcc ggg tcc gag acg      288
88 Pro Gly Phe Thr Leu Gln Asn Val Gly Arg Lys Ser Gly Ser Glu Thr
89                      85                      90                      95
91 ccg ctt ccg gaa acc gac ctg gcg cac tgc ttc tac tcc ggc acc gtg      336
92 Pro Leu Pro Glu Thr Asp Leu Ala His Cys Phe Tyr Ser Gly Thr Val
93      100                      105                      110
95 aat ggc gat ccc agc tcg gct gcc gcc ctc agc ctc tgc gag ggc gtg      384
96 Asn Gly Asp Pro Ser Ser Ala Ala Ala Leu Ser Leu Cys Glu Gly Val
97      115                      120                      125
99 cgc ggc gcc ttc tac ctg ctg ggg gag gcg tat ttc atc cag ccg ctg      432
100 Arg Gly Ala Phe Tyr Leu Leu Gly Glu Ala Tyr Phe Ile Gln Pro Leu
101      130                      135                      140
103 ccc gcc gcc agc gag cgc ctc gcc acc gcc gcc cca ggg gag aag ccg      480
104 Pro Ala Ala Ser Glu Arg Leu Ala Thr Ala Ala Pro Gly Glu Lys Pro
105 145                      150                      155                      160
107 ccg gca cca cta cag ttc cac ctc ctg cgg cgg aat cgg cag ggc gac      528
108 Pro Ala Pro Leu Gln Phe His Leu Leu Arg Arg Asn Arg Gln Gly Asp
109                      165                      170                      175
111 gta ggc ggc acg tgc ggg gtc gtg gac gac gag ccc cgg ccg act ggg      576
112 Val Gly Gly Thr Cys Gly Val Val Asp Asp Glu Pro Arg Pro Thr Gly
113      180                      185                      190
115 aaa gcg gag acc gaa gac gag gac gaa ggg act gag ggc gag gac gaa      624
116 Lys Ala Glu Thr Glu Asp Glu Asp Glu Gly Thr Glu Gly Glu Asp Glu
117      195                      200                      205
119 ggg cct cag tgg tcg ccg cag gac ccg gca ctg caa ggc gta gga cag      672
120 Gly Pro Gln Trp Ser Pro Gln Asp Pro Ala Leu Gln Gly Val Gly Gln
121      210                      215                      220
123 ccc aca gga act gga agc ata aga aag aag cga ttt gtg tcc agt cac      720
124 Pro Thr Gly Thr Gly Ser Ile Arg Lys Lys Arg Phe Val Ser Ser His
125 225                      230                      235                      240
127 cgc tat gtg gaa acc atg ctt gtg gca gac cag tcg atg gca gaa ttc      768
128 Arg Tyr Val Glu Thr Met Leu Val Ala Asp Gln Ser Met Ala Glu Phe
129                      245                      250                      255
131 cac ggc agt ggt cta aag cat tac ctt ctc acg ttg ttt tcg gtg gca      816
132 His Gly Ser Gly Leu Lys His Tyr Leu Leu Thr Leu Phe Ser Val Ala
133      260                      265                      270
135 gcc aga ttg tac aaa cac ccc agc att cgt aat tca gtt agc ctg gtg      864
136 Ala Arg Leu Tyr Lys His Pro Ser Ile Arg Asn Ser Val Ser Leu Val
137      275                      280                      285
139 gtg gtg aag atc ttg gtc atc cac gat gaa cag aag ggg ccg gaa gtg      912
140 Val Val Lys Ile Leu Val Ile His Asp Glu Gln Lys Gly Pro Glu Val
141      290                      295                      300
143 acc tcc aat gct gcc ctc act ctg cgg aac ttt tgc aac tgg cag aag      960
144 Thr Ser Asn Ala Ala Leu Thr Leu Arg Asn Phe Cys Asn Trp Gln Lys

```


RAW SEQUENCE LISTING

DATE: 09/20/2001

PATENT APPLICATION: US/09/373,658C

TIME: 10:21:59

Input Set : A:\seqlist_1488 1070006.txt

Output Set: N:\CRF3\09202001\I373658C.raw

```

212 gga ggg aag tac tgt gaa ggc aaa cga gtg cgc tac aga tcc tgt aac 1776
213 Gly Gly Lys Tyr Cys Glu Gly Lys Arg Val Arg Tyr Arg Ser Cys Asn
214      580      585      590
216 ctt gag gac tgt cca gac aat aat gga aaa acc ttt aga gag gaa caa 1824
217 Leu Glu Asp Cys Pro Asp Asn Asn Gly Lys Thr Phe Arg Glu Glu Gln
218      595      600      605
220 tgt gaa gca cac aac gag ttt tca aaa gct tcc ttt ggg agt ggg cct 1872
221 Cys Glu Ala His Asn Glu Phe Ser Lys Ala Ser Phe Gly Ser Gly Pro
222      610      615      620
224 gcg gtg gaa tgg att ccc aag tac gct ggc gtc tca cca aag gac agg 1920
225 Ala Val Glu Trp Ile Pro Lys Tyr Ala Gly Val Ser Pro Lys Asp Arg
226 625      630      635      640
228 tgc aag ctc atc tgc caa gcc aaa ggc att ggc tac ttc ttc gtt ttg 1968
229 Cys Lys Leu Ile Cys Gln Ala Lys Gly Ile Gly Tyr Phe Phe Val Leu
230      645      650      655
232 cag ccc aag gtt gta gat ggt act cca tgt agc cca gat tcc acc tct 2016
233 Gln Pro Lys Val Val Asp Gly Thr Pro Cys Ser Pro Asp Ser Thr Ser
234      660      665      670
236 gtc tgt gtg caa gga cag tgt gta aaa gct ggt tgt gat cgc atc ata 2064
237 Val Cys Val Gln Gly Gln Cys Val Lys Ala Gly Cys Asp Arg Ile Ile
238      675      680      685
240 gac tcc aaa aag aag ttt gat aaa tgt ggt gtt tgc ggg gga aat gga 2112
241 Asp Ser Lys Lys Lys Phe Asp Lys Cys Gly Val Cys Gly Gly Asn Gly
242      690      695      700
244 tct act tgt aaa aaa ata tca gga tca gtt act agt gca aaa cct gga 2160
245 Ser Thr Cys Lys Lys Ile Ser Gly Ser Val Thr Ser Ala Lys Pro Gly
246 705      710      715      720
248 tat cat gat atc atc aca att cca act gga gcc acc aac atc gaa gtg 2208
249 Tyr His Asp Ile Ile Thr Ile Pro Thr Gly Ala Thr Asn Ile Glu Val
250      725      730      735
253 aaa cag cgg aac cag agg gga tcc agg aac aat ggc agc ttt ctt gcc 2256
254 Lys Gln Arg Asn Gln Arg Gly Ser Arg Asn Asn Gly Ser Phe Leu Ala
255      740      745      750
257 atc aaa gct gct gat ggc aca tat att ctt aat ggt gac tac act ttg 2304
258 Ile Lys Ala Ala Asp Gly Thr Tyr Ile Leu Asn Gly Asp Tyr Thr Leu
259      755      760      765
261 tcc acc tta gag caa gac att atg tac aaa ggt gtt gtc ttg agg tac 2352
262 Ser Thr Leu Glu Gln Asp Ile Met Tyr Lys Gly Val Val Leu Arg Tyr
263      770      775      780
265 agc ggc tcc tct gcg gca ttg gaa aga att cgc agc ttt agc cct ctc 2400
266 Ser Gly Ser Ser Ala Ala Leu Glu Arg Ile Arg Ser Phe Ser Pro Leu
267 785      790      795      800
269 aaa gag ccc ttg acc atc cag gtt ctt act gtg ggc aat gcc ctt cga 2448
270 Lys Glu Pro Leu Thr Ile Gln Val Leu Thr Val Gly Asn Ala Leu Arg
271      805      810      815
273 cct aaa att aaa tac acc tac ttc gta aag aag aag aag gaa tct ttc 2496
274 Pro Lys Ile Lys Tyr Thr Tyr Phe Val Lys Lys Lys Lys Glu Ser Phe
275      820      825      830
277 aat gct atc ccc act ttt tca gca tgg gtc att gaa gag tgg ggc gaa 2544

```

RAW SEQUENCE LISTING

DATE: 09/20/2001

PATENT APPLICATION: US/09/373,658C

TIME: 10:21:59

Input Set : A:\seqlist_1488 1070006.txt

Output Set: N:\CRF3\09202001\I373658C.raw

```

278 Asn Ala Ile Pro Thr Phe Ser Ala Trp Val Ile Glu Glu Trp Gly Glu
279      835      840      845
281 tgt tct aag tca tgt gaa ttg ggt tgg cag aga aga ctg gta gaa tgc 2592
282 Cys Ser Lys Ser Cys Glu Leu Gly Trp Gln Arg Arg Leu Val Glu Cys
283      850      855      860
285 cga gac att aat gga cag cct gct tcc gag tgt gca aag gaa gtg aag 2640
286 Arg Asp Ile Asn Gly Gln Pro Ala Ser Glu Cys Ala Lys Glu Val Lys
287 865      870      875      880
289 cca gcc agc acc aga cct tgt gca gac cat ccc tgc ccc cag tgg cag 2688
290 Pro Ala Ser Thr Arg Pro Cys Ala Asp His Pro Cys Pro Gln Trp Gln
291      885      890      895
293 ctg ggg gag tgg tca tca tgt tct aag acc tgt ggg aag ggt tac aaa 2736
294 Leu Gly Glu Trp Ser Ser Cys Ser Lys Thr Cys Gly Lys Gly Tyr Lys
295      900      905      910
297 aaa aga agc ttg aag tgt ctg tcc cat gat gga ggg gtg tta tct cat 2784
298 Lys Arg Ser Leu Lys Cys Leu Ser His Asp Gly Gly Val Leu Ser His
299      915      920      925
301 gag agc tgt gat cct tta aag aaa cct aaa cat ttc ata gac ttt tgc 2832
302 Glu Ser Cys Asp Pro Leu Lys Lys Pro Lys His Phe Ile Asp Phe Cys
303      930      935      940
305 aca atg gca gaa tgc agt taa gtggtttaag tgggtgtagc tttgaggcaa 2883
306 Thr Met Ala Glu Cys Ser
307 945      950
309 ggcaaagtga ggaagggctg gtgcagggaa agcaagaagg ctggagggat ccagcgtatc 2943
311 ttgccagtaa ccagtgaagt gtatcagtaa ggtgggatta tgggggtaga tagaaaagga 3003
313 gttgaatcat cagagtaaac tgccagttgc aaatttgata ggatagttag tgaggattat 3063
W--> 316 taacctctga gcagtgatat agcataataa anccccgggc attattatta ttatttcttt 3123
318 tgttacatct attacaagtt tagaaaaaac aaagcaattg tcaaaaaaaaa aaaaaaaaaa 3183
W--> 320 aaaaaaaaaa aaagggcggc cgctctagag gatccctcga gggggcccaag cttacgcgtg 3243
322 catgntgtca tnagtctn 3261
327 <210> SEQ ID NO: 2
328 <211> LENGTH: 950
329 <212> TYPE: PRT
330 <213> ORGANISM: Homo sapiens
332 <400> SEQUENCE: 2
333 Met Gly Asn Ala Glu Arg Ala Pro Gly Ser Arg Ser Phe Gly Pro Val
334 1 5 10 15
336 Pro Thr Leu Leu Leu Leu Ala Ala Ala Leu Leu Ala Val Ser Asp Ala
337 20 25 30
339 Leu Gly Arg Pro Ser Glu Glu Asp Glu Glu Leu Val Val Pro Glu Leu
340 35 40 45
342 Glu Arg Ala Pro Gly His Gly Thr Thr Arg Leu Arg Leu His Ala Phe
343 50 55 60
345 Asp Gln Gln Leu Asp Leu Glu Leu Arg Pro Asp Ser Ser Phe Leu Ala
346 65 70 75 80
348 Pro Gly Phe Thr Leu Gln Asn Val Gly Arg Lys Ser Gly Ser Glu Thr
349 85 90 95
351 Pro Leu Pro Glu Thr Asp Leu Ala His Cys Phe Tyr Ser Gly Thr Val
352 100 105 110

```

Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

→

VERIFICATION SUMMARY

DATE: 09/20/2001

PATENT APPLICATION: US/09/373,658C

TIME: 10:22:00

Input Set : A:\seqlist_1488 1070006.txt

Output Set: N:\CRF3\09202001\I373658C.raw

L:25 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:316 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:777 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:779 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:1534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:1546 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:1548 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:1550 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:1639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:1645 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:1647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:1692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1702 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1704 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:1731 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:1733 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:9319 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40
L:9321 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40
L:9647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:9653 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:9655 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:9657 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:9659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:9661 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:9663 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:9665 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:9688 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:9737 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:9743 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:9745 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:9780 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45
L:9822 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46
L:9824 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46
L:9826 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46
L:9865 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47
L:9918 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
L:9920 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
L:9922 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
L:9924 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
L:9987 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49
L:9989 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49
L:9991 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49
L:9993 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49
L:10049 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50
L:10051 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50
L:10053 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50
L:10055 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50

VERIFICATION SUMMARY

DATE: 09/20/2001

PATENT APPLICATION: US/09/373,658C

TIME: 10:22:00

Input Set : A:\seqlist_1488 1070006.txt

Output Set: N:\CRF3\09202001\I373658C.raw

L:10057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50

L:10176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51

L:10182 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51